

January 22, 1996

**MEMORANDUM**

**TO:** Brian R. Monson, Chief  
Operating Permits Bureau  
Permits and Enforcement *BRM*

**FROM:** Harbi Elshafei, Air Quality Engineer *Harbi*  
Operating Permits Bureau  
Jose Fabile, Air Quality Engineer  
Construction Permits Bureau

**THROUGH:** Susan J. Richards, Air Quality Permits Manager *SJR*  
Operating Permits Bureau

**SUBJECT:** Technical Analysis for Tier II Operating Permit #001-00027  
Saint Alphonsus Regional Medical Center, Boise, Idaho

**PURPOSE**

The purpose for this memorandum is to satisfy the requirements of IDAPA 16.01.01 Sections 400 through 406 (Rules for the Control of Air Pollution in Idaho) for issuing Operating Permits (OP).

**FACILITY DESCRIPTION**

Saint Alphonsus Regional Medical Center (SARMC) is located at 1055 North Curtis Road in Boise, Idaho. SARMC facility consists of four (4) boilers, six (6) emergency generators, one (1) sterilizer, painting booth, laboratories, and four (4) diesel storage tanks.

**PROJECT DESCRIPTION**

This project is for an Operating Permit for the following existing point and fugitives emission sources.

**Point Sources:**

- (1) Boiler #1 - Cleaver Brooks (Model: D-52; Serial #WL 1446) gas-fired with a maximum rated capacity of 25,000 lb steam/hr. The backup fuel is No. 2 fuel oil. This source was constructed in 1972.

**Stack Design Specification**

Height:	95 feet (minimum)
Exit Diameter:	6.5 X 4 feet
Exit Gas Flow Rate:	11996 acfm (at rated capacity)
Exit Temperature:	445°F

- (2) Boiler #2 - Cleaver Brooks (Model: D-52; Serial #WL 1445) gas-fired with a maximum rated capacity of 25,000 lb steam/hr. The backup fuel is No.2 fuel oil. This source was constructed in 1972.

**Stack Design Specification**

Height:	95 feet (minimum)
Exit Diameter:	6.5 X 4 feet
Exit Gas Flow Rate:	11996 acfm (at rated capacity)
Exit Temperature:	445°F

- (3) Boiler #3 - Cleaver Brooks (Model: D-26; Serial #WL 3006) gas-fired with a maximum rated capacity of 10,000 lb steam/hr. The backup fuel is No.2 fuel oil. This source was constructed in october 1980.

Stack Design Specification

Height: 95 feet (minimum)  
Exit Diameter: 6.5 X 4 feet  
Exit Gas Flow Rate: 2411 acfm (at rated capacity)  
Exit Temperature: 445°F

- (4) Boiler #5 - Bryan Steam Corp (Model: RV500-W-FDG0; Serial #73005) gas-fired with maximum heat input of 5 MM Btu/hr. The back-up fuel is No. #2 fuel oil. The boiler is used for back-up when the main building steam supply is not adequate. This source was issued a PTC in May 20, 1993.

Stack Design Specification

Height: 93 feet (minimum)  
Exit Diameter: 1.83 feet  
Exit Gas Flow Rate: 1083 acfm (at rated capacity)  
Exit Temperature: 550°F

- (5) Diesel Emergency Generator #1 - Caterpillar (Model: D398; Serial #500TH2039). The generator's rated capacity is 675 kilowatts. This source was constructed in 1972.

Stack Design Specification

Height: 95 feet (minimum)  
Exit Diameter: 6.5 X 4 feet  
Exit Gas Flow Rate: 6232 acfm  
Exit Temperature: 910°F

- (6) Diesel Emergency Generator #2 - Caterpillar (Model: D349-SRCR; Serial #600TH3379). The generator's rated capacity is 750 kilowatts. This source was constructed in 1981.

Stack Design Specification

Height: 95 feet (minimum)  
Exit Diameter: 6.5 X 4 feet  
Exit Gas Flow Rate: 5250 acfm  
Exit Temperature: 891°F

- (7) Diesel Emergency Generator #3 - Kohler (Model: 60R0Z571; Serial #251709). The generator's rated capacity is sixty (60) kilowatts. This source was constructed in 1990.

Stack Design Specification

Height: 7 feet (minimum)  
Exit Diameter: 0.5 feet  
Exit Gas Flow Rate: 473 acfm  
Exit Temperature: 1085°F

- (8) Diesel Emergency Generator #4 - Detroit Diesel (Model: 573RSL7034BP-175; Serial #YIL 3920248). The generator's rated capacity is 750 kilowatts. This source was constructed in May 1993.

Stack Design Specification

Height: 93 feet (minimum)  
Exit Diameter: 0.83 feet  
Exit Gas Flow Rate: 6460 acfm  
Exit Temperature: 825°F

- (9) Diesel Emergency Generator #5 - Kohler (Model: 80R0ZJ). The generator's rated capacity is eight (8) kilowatts. On July 24, 1995, the source was issued a Category II exemption in accordance with IDAPA 16.01.01.221.d. The generator is located adjacent to Generator #3.

Stack Design Specification

Height:	9 feet (minimum)
Exit Diameter:	0.33 feet
Exit Gas Flow Rate:	690 acfm
Exit Temperature:	1009°F

- (10) Diesel Emergency Generator #6 - Kohler (Model: 600ROZD71; Serial #351727). The generator's rated capacity is 600 kilowatts. This source was constructed in 1994.

Stack Design Specification

Height:	24 feet
Exit Diameter:	0.84 feet
Exit Gas Flow Rate:	6080 acfm
Exit Temperature:	845°F

- (11) Sterilizer - AMSCO (Model: Eagle E3048-1; Serial #0124291-04). The sterilizer uses a product called Penn-Gas which contains ten percent (10%) ethylene oxide and a trade secret mixture of HCFC. This source was constructed in 1992.

Stack Design Specifications

Height:	26 feet (minimum)
Exit Diameter:	10 X 8 feet
Exit Gas Flow Rate:	35830 acfm
Exit Temperature:	70°F

- (12) Paint Booth - Devibis (Model: DW 6305). The paint booth was constructed in 1972. This source is used to paint furniture.

Stack Design Specifications

Height:	20 feet (minimum)
Exit Diameter:	2.8 feet
Exit Gas Flow Rate:	10000 acfm
Exit Temperature:	70°F

- (13) Storage Tanks. There are four (4) storage tanks at the facility. The tanks contains No. 2 fuel oil.

- (14) Laboratories: Laboratories are considered as one single emissions unit.

A more detailed process description is found in the operating permit application materials.

SUMMARY OF EVENTS

On February 21, 1995, DEQ received an application for a Tier II Operating Permit, prepared by CH2M Hill Company. On March 22, 1995, the application was determined incomplete. On April 24, 1995, information was received responding to the incompleteness determination. On May 15, 1995, DEQ received additional information which include the ISC diffusion modeling results. On June 23, 1995, a meeting was held between SARMC staff and DEQ staff to discuss the May 25, 1995, incompleteness letter. On June 26, 1995, DEQ received a response to the May 25, 1995, incompleteness letter. On December 21, 1995, the SARMC informed DEQ through a letter that the existing incinerator and the heat recovery Boiler #4 have been rendered non-operational, are isolated from the system, and are in the process of being removed. On January 18, 1996, Harbi Elshafei and Jose Fabile, Air Quality Engineers, toured the incinerator site at the facility and have confirmed that the incinerator and Boiler #4 have been completely removed from the SARMC facility.

After reviewing all applicable federal and state rules and regulations, the application was determined complete on July 25, 1995. A public comment period was held from October 2, 1995, through November 7, 1995.

## DISCUSSION

### 1. Emission Estimates

Emission estimates were provided by SARMC and can be seen in the April 24, 1995, application and in the June 26, 1995, additional information submittal. DEQ also estimated the PM, PM-10, SO<sub>2</sub>, NO<sub>x</sub>, CO, and the VOC emissions by using emission factors from AP-42. Sections 1.4 (natural gas combustion) and 1.3 (fuel oil combustion) of AP-42 were used to estimate emissions from the boilers. AP-42, Sections 3.3 (gasoline and all diesel industrial engines) and 3.4 (large stationary diesel and stationary dual fuel engines) were used to estimate emissions from the emergency generators. The calculation spreadsheet is in Appendix A.

Oxides of nitrogen (NO<sub>x</sub>) is the pollutant emitted in the greatest amount from the fuel burning equipment (i.e., boilers and generators). Potential to emit (PTE) for NO<sub>x</sub> as estimated by DEQ and based on 8,760 hours of operation per year is greater than 100 tons per year (T/yr), the major source threshold. SARMC requested an emissions "cap" for the four (4) natural gas-fired boilers based on the natural gas consumptions of 1,000,000 therms per year. A short term emission limit (in lb/hr) for the criteria air pollutants (i.e., PM, PM-10, and NO<sub>x</sub>) emitted from each boiler was established and that can be seen in Appendix A of this memo. Long term emission limits (in tons/yr) for NO<sub>x</sub>, PM, & PM-10 emitted from all of the natural gas-fired boiler were also established as seen in Appendix A. The actual yearly NO<sub>x</sub> emissions resulting from natural gas combustion in the boilers and based on the 1,000,000 therms consumption of natural gas is 7.29 tons per year (T/yr).

Compliance determination for the gas usage can be verified by an annual gas usage report to DEQ on a rolling annual basis.

The actual NO<sub>x</sub> emissions from the emergency generators were estimated to be 6.32 tons per year (T/yr), based on an annual operation for each generator of 125 hours.

The actual total NO<sub>x</sub> emissions from all emissions units (i.e., boilers operating on natural gas and on No. 2 fuel oil, and generators) at the facility is estimated to be 13.62 tons per year (T/yr).

The facility has a sterilizer which uses Pen-Gas. The Pen-Gas contains ten percent (10%) ethylene oxide, as indicated by the MSDS. Emissions of ethylene oxides (a regulated HAP) from the sterilizer was estimated by the applicant by assuming that 100% of that pollutant is emitted to the atmosphere. Based on that assumption, the emission rate of that pollutant, per applicant submittal, is 0.42 tons per year (T/yr). Ethylene oxide emissions are not included in the final operating permit.

Formaldehyde and xylene are emitted from the SARMC laboratories as fugitives. To simplify emissions from the laboratories, it is assumed that emissions from the laboratories as one emissions unit. Emissions of formaldehyde and xylene, per applicant submittal, and based on 8,760 hours of operation per year, are 0.37 tons per year (T/yr) and 0.59 tons per year (T/yr), respectively. Formaldehyde and xylene emissions are not included in the final operating permit.

Volatile organic compounds (VOCs) emissions from storage tanks are estimated by the applicant and can be seen in the application. The VOCs emissions are estimated to be 1.8 pounds per year (lb/yr). These emissions are not included in the final operating permit.

SARMC has a paint booth which operates less than eight (8) hours per week and less than 400 hours per year. The VOCs emissions from this source are estimated to be .28 tons/yr, based on applicant calculations. These emissions are not included in the final operating permit.

All PM emissions from all emission units at the facility are assumed to be PM-10.

Fugitive dust emissions from paved roads and from parking areas at the facility were not estimated. It was assumed that fugitive dust emissions will be minimum because all the roads at the facility are paved. Fugitive dust emissions shall be controlled in accordance with IDAPA 16.01.01.650 of the Rules.

2. Modeling

SARMC performed the ISC2 dispersion model for five of the criteria air pollutants (i.e., PM<sub>10</sub>, SO<sub>2</sub>, CO, NO<sub>x</sub>, and VOC) for eight (8) emission points at the facility. The modeling results were submitted to DEQ on the August 3, 1995.

DEQ also conducted the EPA ISC2 dispersion model for pollutant emissions from ten (10) emission points (the boilers & generators) at the facility. Modeling was performed only on PM-10, CO, and NO<sub>x</sub>. Fugitive emissions from the facility were not modeled.

The predicted PM-10 and NO<sub>x</sub> impacts were determined to be below the National Ambient Air Quality Standards (NAAQS) --- please refer to Appendix B for the modeling analysis.

Modeling was also conducted for the emissions from Generator #1 and Generator #2 operating simultaneously for twenty (20) hrs/day, and Boiler #1 operating continuously during electrical power outages at the facility. PM-10 emission rates of 0.139 lb/hr, which were obtained from the manufacturer, for each of these emergency generators were used for the modeling. The Model predicted the PM-10 impacts were below the NAAQS --- please refer to Appendix B.

A technical memorandum by Mary Walsh, DEQ Meteorologist, regarding the modeling of PM-10, CO, and NO<sub>x</sub> emissions from the facility is included in Appendix B.

3. Area Classification

SARMC is located in Boise. Boise is designated a non-attainment for PM-10 and CO. This area is located in AQCR 63. For other criteria air pollutants (i.e., SO<sub>2</sub>, NO<sub>x</sub>, and O<sub>3</sub>), the area is classified as attainment or unclassified.

4. Facility Classification

The facility is not a designated facility as defined in IDAPA 16.01.01.25. The facility is classified as an A2 source because the actual emissions of NO<sub>x</sub> is less than 100 tons per year (T/yr).

5. Regulatory Review

This operating permit is subject to the following permitting requirements:

- |    |                                 |   |
|----|---------------------------------|---|
| a. | <u>IDAPA 16.01.01.401</u>       | Tier II Operating Permit.                       |
| b. | <u>IDAPA 16.01.01.403</u>       | Permit Requirements for Tier II Sources.        |
| c. | <u>IDAPA 16.01.01.404.01(c)</u> | Opportunity for Public Comment.                 |
| d. | <u>IDAPA 16.01.01.404.04</u>    | Authority to Revise Operating Permits.          |
| e. | <u>IDAPA 16.01.01.406</u>       | Obligation to Comply.                           |
| f. | <u>IDAPA 16.01.01.470</u>       | Permit Application Fees for Tier II Permits.    |
| g. | <u>IDAPA 16.01.01.625</u>       | Visible Emission Limitation.                    |
| h. | <u>IDAPA 16.01.01.650</u>       | General Rules for the Control of Fugitive Dust. |
| i. | <u>IDAPA 16.01.01.675</u>       | Fuel Burning Equipment -- Particulate Matter.   |
| j. | <u>IDAPA 16.01.01.728</u>       | Distillate Fuel Oil.                            |

FEES

Fees apply to this facility in accordance with IDAPA 16.01.01.470. The facility is subject to permit application fees for Tier II permits of five hundred dollars (\$500.00). IDAPA 16.01.01.470 became effective on March 7, 1995.

RECOMMENDATIONS

Based on the review of the Operating Permit application and on applicable state and federal regulations concerning the permitting of air pollution sources, the Bureau staff recommends that Saint Alphonsus Regional Medical Center in Boise be issued a Tier II Operating Permit for the sources that exist at the facility. Staff also recommends that the facility be notified of the Tier II permit fee requirement in writing. This fee will be applicable upon issuance of the permit.

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cc: J. Palmer, SWIRO  
Source File  
COF

# **APPENDIX A**

## SARMC EMISSION ESTIMATES

## FUEL BURNING EQUIPMENT - GENERATORS

GENERATORS	GEN 1	GEN 2	GEN 3	GEN 4	GEN 5	GEN 6	ALL UNITS
MODEL	CAT D398	CAT D349	KOHLER 60R	DET. P163	KOHLER 80R	KOHLER 600R	
CAP (KW)	8.76E+02	7.50E+02	8.00E+01	7.50E+02	8.00E+01	6.00E+02	2.92E+03
PRIMARY FUEL	DIESEL	DIESEL	DIESEL	DIESEL	DIESEL	DIESEL	DIESEL
FUEL RATE (MAX)							
GAL/HR	5.80E+01	5.80E+01	5.20E+00	5.80E+01	6.80E+00	5.30E+01	2.33E+02
MMBtu/HR	7.84E+00	7.84E+00	7.28E-01	7.84E+00	9.52E-01	7.42E+00	3.26E+01
GAL/YR	7.00E+03	7.00E+03	6.50E+02	7.00E+03	8.50E+02	6.53E+03	2.91E+04
MMBtu/YR	9.80E+02	9.80E+02	9.10E+01	9.80E+02	1.19E+02	9.28E+02	4.08E+03
OPN HR/yr	1.25E+02	1.25E+02	1.25E+02	1.25E+02	1.25E+02	7.50E+02	1.38E+03
EMISSIONS FROM GENERATOR OPERATIONS							
POLLUTANT	GEN 1	GEN 2	GEN 3	GEN 4	GEN 5	GEN 6	ALL UNITS
PARTICULATE MATTER (PM)							
E.F. (LB/MMBtu)	3.10E-01	3.10E-01	3.10E-01	3.10E-01	3.10E-01	3.10E-01	3.10E-01
EM. (LB/HR)	2.43E+00	2.43E+00	2.26E-01	2.43E+00	2.95E-01	2.30E+00	1.01E+01
EM(T/yr)-125 HRS	1.52E-01	1.52E-01	1.41E-02	1.52E-01	1.84E-02	1.44E-01	6.32E-01
EM(T/yr)-500 HRS	6.08E-01	1.18E+00	1.18E+00	1.18E+00	1.18E+00	1.18E+00	6.41E+00
EM(T/yr)-8760 HRS	1.06E+01	1.06E+01	9.88E-01	1.06E+01	1.29E+00	1.01E+01	4.43E+01
SULFUR DIOXIDE							
E.F. (LB/MMBtu)	2.90E-01	2.90E-01	2.90E-01	2.90E-01	2.90E-01	2.90E-01	2.90E-01
EM. (LB/HR)	2.27E+00	2.27E+00	2.11E-01	2.27E+00	2.76E-01	2.15E+00	9.46E+00
EM(T/yr)-125 HRS	1.42E-01	1.42E-01	1.32E-02	1.42E-01	1.73E-02	1.34E-01	6.91E-01
EM(T/yr)-500 HRS	5.68E-01	5.68E-01	5.28E-02	5.68E-01	6.90E-02	5.38E-01	2.36E+00
EM(T/yr)-8760 HRS	9.96E+00	9.96E+00	9.25E-01	9.96E+00	1.21E+00	9.42E+00	4.14E+01
NITROGEN OXIDE (NOx)							
E.F. (LB/MMBtu)	3.10E+00	3.10E+00	3.10E+00	3.10E+00	3.10E+00	3.10E+00	3.10E+00
EM. (LB/HR)	2.43E+01	2.43E+01	2.26E+00	2.43E+01	2.95E+00	2.30E+01	1.01E+02
EM. (T/yr)-125 HRS	1.52E+00	1.52E+00	1.41E-01	1.52E+00	1.84E-01	1.44E+00	6.32E+00
EM(T/yr)-500 HRS	6.08E+00	6.08E+00	5.64E-01	6.08E+00	7.38E-01	5.75E+00	2.53E+01
EM(T/yr)-8760 HRS	1.06E+02	1.06E+02	9.88E+00	1.06E+02	1.29E+01	1.01E+02	4.43E+02
CARBON MONOXIDE (CO)							
E.F. (LB/MMBtu)	7.90E-01	7.90E-01	7.90E-01	7.90E-01	7.90E-01	7.90E-01	7.90E-01
EM. (LB/HR)	6.19E+00	6.19E+00	5.75E-01	6.19E+00	7.52E-01	5.88E+00	2.58E+01
EM. (T/yr)-125 HRS	3.87E-01	3.87E-01	3.59E-02	3.87E-01	4.70E-02	3.68E-01	1.61E+00
EM(T/yr)-500 HRS	1.55E+00	1.55E+00	1.44E-01	1.55E+00	1.88E-01	1.47E+00	8.44E+00
EM(T/yr)-8760 HRS	1.70E+00	1.70E+00	1.57E-01	1.70E+00	2.08E-01	1.60E+00	7.05E+00
VOLATILE ORGANIC COMPOUNDS (VOC)							
E.F. (LB/MMBtu)	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.00E-01	8.00E-01
EM. (LB/HR)	6.27E+00	6.27E+00	5.82E-01	6.27E+00	7.62E-01	5.94E+00	2.61E+01
EM. (T/yr)-125 HRS	3.92E-01	3.92E-01	3.64E-02	3.92E-01	4.76E-02	3.71E-01	1.63E+00
EM(T/yr)-500 HRS	1.57E+00	1.57E+00	1.46E-01	1.57E+00	1.90E-01	1.48E+00	6.52E+00
EM(T/yr)-8760 HRS	2.75E+01	2.75E+01	2.55E+00	2.75E+01	3.34E+00	2.60E+01	1.14E+02



SARMC EMISSION ESTIMATES

FUEL BURNING EQUIPMENTS - BOILERS

A. BOILERS	BOILER 1	BOILER 2	BOILER 3	BOILER 5	ALL BOILERS
YEAR INSTALLED	1972	1972	1980	1992	
STEAM CAP(LB/HR)	2.50E+04	2.50E+04	1.00E+04	4.00E+03	8.40E+04
PRIMARY FUEL	NAT. GAS	NAT. GAS	NAT. GAS	NAT. GAS	
FUEL RATE (MAX)					
SCFH	3.15E+04	3.15E+04	1.28E+04	5.00E+03	8.08E+04
MILLION SCF/YR					1.00E+02
SEC. FUEL	NO.2 DIESEL	NO.2 DIESEL	NO.2 DIESEL	NO.2 DIESEL	
GPH	2.30E+02	2.30E+02	1.05E+02	3.50E+01	8.00E+02
GAL/Yr	1.10E+04	1.10E+04	5.04E+03	1.88E+03	2.88E+04

EMISSIONS FROM NATURAL GAS COMBUSTION						
POLLUTANT	BOILER 1	BOILER 2	BOILER 3	BOILER 5	ALL BOILERS	ALL BOILERS
PART. MATTER (PM)					LB/HR	T/yr
E.F.(LB/C.F.)	1.37E-08	1.37E-08	1.37E-08	1.20E-08		
EM.(LB/HR)	4.32E-01	4.32E-01	1.75E-01	6.00E-02	1.10E+00	
EM.(T/yr)						8.85E-01
SULFUR DIOXIDE						
E.F.(LB/C.F.)	8.00E-07	8.00E-07	8.00E-07	8.00E-07		
EM.(LB/HR)	1.88E-02	1.88E-02	7.68E-03	3.00E-03	4.85E-02	
EM.(T/yr)						3.00E-02
NITROGEN OXIDE (NOx)						
E.F.(LB/C.F.)	1.40E-04	1.40E-04	1.40E-04	1.00E-04		
EM.(LB/HR)	4.41E+00	4.41E+00	1.78E+00	5.00E-01	1.11E+01	
EM.(T/yr)						7.00E+00
CARBON MONOXIDE (CO)						
E.F.(LB/C.F.)	3.50E-05	3.50E-05	3.50E-05	2.10E-05		
EM.(LB/HR)	1.10E+00	1.10E+00	4.48E-01	1.05E-01	2.78E+00	
EM.(T/yr)						1.75E+00
TOTAL ORGANIC COMPOUNDS (TOC)						
E.F.(LB/C.F.)	5.80E-06	5.80E-06	5.80E-06	8.00E-06		
EM.(LB/HR)	1.83E-01	1.83E-01	7.42E-02	4.00E-02	4.80E-01	
EM.(T/yr)						4.00E-01

EMISSIONS FROM NO. 2 FUEL COMBUSTION						
PART. MATTER (PM)	BOILER 1	BOILER 2	BOILER 3	BOILER 5	ALL BOILERS	ALL BOILERS
E.F.(LB/GAL)	2.00E-03	2.00E-03	2.00E-03	2.00E-03	LB/HR	T/yr
EM.(LB/HR)	4.80E-01	4.80E-01	2.10E-01	7.00E-02	1.20E+00	
EM.(T/yr)	1.10E-02	1.10E-02	5.04E-03	1.88E-03		2.88E-02
SULFUR DIOXIDE (SO2)						
E.F.(LB/GAL)	3.12E-02	3.12E-02	3.12E-02	3.12E-02		
EM.(LB/HR)	7.19E+00	7.19E+00	3.28E+00	1.09E+00	1.87E+01	
EM.(T/yr)	1.72E-01	1.72E-01	7.87E-02	2.62E-02		4.50E-01
NITROGEN OXIDE (NOx)						
E.F.(LB/GAL)	2.00E-02	2.00E-02	2.00E-02	2.00E-02		
EM.(LB/HR)	4.80E+00	4.80E+00	2.10E+00	7.00E-01	1.20E+01	
EM.(T/yr)	1.10E-01	1.10E-01	5.04E-02	1.88E-02		2.88E-01
CARBON MONOXIDE (CO)						
E.F.(LB/GAL)	5.00E-03	5.00E-03	5.00E-03	5.00E-03		
EM.(LB/HR)	1.15E+00	1.15E+00	5.25E-01	1.75E-01	3.00E+00	
EM.(T/yr)	2.78E-02	2.78E-02	1.28E-02	4.20E-03		7.20E-02
TOTAL ORGANIC COMPOUNDS (TOC)						
E.F.(LB/GAL)	2.52E-04	2.52E-04	2.52E-04	5.58E-04		
EM.(LB/HR)	5.80E-02	5.80E-02	2.85E-02	1.85E-02	1.82E-01	
EM.(T/yr)	1.38E-03	1.38E-03	6.35E-04	4.87E-04		3.88E-03

SUMMARY FOR BOILER EMISSIONS

POLLUTANT	NAT. GAS	NO.2 DIESEL	TOTAL
PM	LB/HR	1.10E+00	1.20E+00
	T/yr	8.85E-01	7.14E-01
SO2	LB/HR	4.85E-02	1.87E+01
	T/yr	3.00E-02	4.50E-01
NOx	LB/HR	1.11E+01	1.20E+01
	T/yr	7.00E+00	7.28E+00
CO	LB/HR	2.78E+00	3.00E+00
	T/yr	1.75E+00	1.82E+00
VOC	LB/HR	4.80E-01	1.82E-01
	T/yr	4.00E-01	4.04E-01

## **APPENDIX B**

January 23, 1996

M E M O R A N D U M

TO: Robert Wilkosz, Chief, Technical Services Bureau (TSB),  
Permits and Enforcement (P&E)

FROM: Mary Walsh, Air Quality Meteorologist, TSB, P&E *MW*

THRU: Avijit Ray, Environmental Sciences Manager, TSB, P&E *Ray*

SUBJECT: Modeling/Impact Assessment for Saint Alphonsus (Boise)

1. SUMMARY

On March 23, 1995, DEQ received an air modeling study of criteria pollutants as part of a Tier II Operating Permit Application for Saint Alphonsus Medical Center in Boise, Idaho. The effects of PM<sub>10</sub>, NO<sub>x</sub>, and CO were modeled for eight different point sources by Human Environmental Services. DEQ completed further modeling on twelve emission points (boilers, generators, and an incinerator) using a draft of the ISCST3 model. ✓

Since that time, the facility has requested an increase in the number of hours of operation for two of their generators. An operating scenario of 5 hours per day was originally factored into the results. The facility would like an increase to 20 hours per day from 5 hours per day. Generators 1 and 2, and natural gas boiler number 1 were modeled together using the newest version of the ISCST3 model and assuming a full time operation of 8760 hours per year. The proposed number of hours were factored into the resulting generator impacts. The boiler will operate continuously for 24 hours per day. The pollutants modeled in this analysis were PM<sub>10</sub> and CO.

The potential impacts of an increase in operation were determined using the newest version of the ISCST3 model. Emission rates obtained from the manufacturer were used for both generators. The emission rate for the natural gas boiler was provided by Air Quality Engineer, Harbi Elshafei. The maximum predicted impacts for PM<sub>10</sub> and CO, operating at 20 hours per day, were found to be within the significant contribution limits specified by IDAPA 16.01.01.89.d and 16.01.01.89.e., Rules for the Control of Air Pollution in Idaho (Rules).

2. DISCUSSION

2.1 Project Description

The applicant operates a hospital on the Boise Bench. The site is in West Boise, within the Northern Ada County PM<sub>10</sub> and CO nonattainment area. The facility proposed amending their Tier II Operating Permit to allow an increase to 20 hours per

day, from 5 hours per day, in the operating restrictions for generators 1 and 2. These two generators and natural gas boiler number 1 will run simultaneously during power outages.

## 2.2 Applicable Air Quality Impact Limits

Due to the proposed modification, the applicable impact limits for  $PM_{10}$  and CO are the significant contribution limits of  $5 \mu\text{g}/\text{m}^3$  24-hour average and  $1 \mu\text{g}/\text{m}^3$  annual average, and  $500 \mu\text{g}/\text{m}^3$  8-hour average and  $2000 \mu\text{g}/\text{m}^3$  1-hour average respectively.

## 2.3 Background Concentrations

Due to the area's nonattainment status for both  $PM_{10}$  and CO, the applicable background concentrations are above the national standards.

## 2.4 Co-contributing Sources

Co-contributing sources were not considered in this analysis.

## 2.5 Modeling Impact Assessment

The newest version of the ISCST3 model was used with Boise 1985 surface and upper air meteorology to assess the potential impact of operating two generators for 20 hours per day and one natural gas boiler for 24 hours per day. In the modeling runs, all sources were assumed to operate continuously for 365 days out of the year.

The resulting 24-hour  $PM_{10}$  concentrations, from the generators, were scaled down by the proposed hours of operation to give the most realistic representation of the potential impact. The maximum predicted concentrations for the generators and the boiler were added together and the resulting combined effects were then compared to the applicable standards.

In determining the annual  $PM_{10}$  impacts, an operating scenario of 125 hours per year, for each generator, and 1179 hours per year for the natural gas boiler were factored into the modeling results.

The following chart compares the predicted concentrations with the allowable impact limits.

Memo to Robert Wilkosz  
January 23, 1996  
Page 3

<u>Pollutant</u>	<u>Predicted</u> <u>Conc.</u> <u>(<math>\mu\text{g}/\text{m}^3</math>)</u>	<u>Ave.</u> <u>Per.</u>	<u>Allowable</u> <u>Conc.</u> <u>(<math>\mu\text{g}/\text{m}^3</math>)</u>	<u>Impact</u> <u>Limit</u> <u>(%)</u>
PM <sub>10</sub> (source)	2.5	24-hour	5.0	50.0
PM <sub>10</sub> (source)	0.1	annual	1.0	10.0
CO(source)	194.2	1-hour	2000.0	9.7
CO(source)	119.5	8-hour	500.0	23.9

### 3. MODELING RESULTS

See attachments. Electronic copies saved on the file server as  
c:\lahey\stalgb.out

MW\ve stal.tec

Attachments

cc: COF (w/o attachments)  
H. Elshafei  
J. Fabile

CO STARTING

CO TITLEONE St. Alphonsus Medical Center Boiler #1, and Generators 1&2 --

CO TITLETWO impacts on PM-10, and CO concentrations.

CO MODELOPT CONC URBAN NOSTD NOCALM

CO AVERTIME 1 8 24 period

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CO RUNORNOT RUN

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CO FINISHED

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\*\*THIS RUN INCLUDES GENERATORS 1&2 AND BOILER #1.\*

\*\*\*\*\*

SO STARTING

\*\* Source Location Cards:

**	SRCID	SRCTYP	XS	YS	ZS
SO LOCATION	G01P	POINT	128	151	.0000
SO LOCATION	G01C	POINT	128	151	.0000
SO LOCATION	G02P	POINT	128	151	.0000
SO LOCATION	G02C	POINT	128	151	.0000
SO LOCATION	NGB01P	POINT	128	151	.0000
SO LOCATION	NGB01C	POINT	128	151	.0000

\*\* Source Parameter Cards:

** POINT:	SRCID	QS	HS	TS	VS	DS
** VOLUME:	SRCID	QS	HS	SYINIT	SZINIT	
** AREA:	SRCID	QS	HS	XINIT		

**SO SRCPARAM	G01P	0.30600	28.96	760.93	1.22	1.75
SO SRCPARAM	G01P	0.01750	28.96	760.93	1.22	1.75

SO SRCPARAM	G01C	0.78000	28.96	760.93	1.22	1.75
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**SO SRCPARAM	G02P	0.30600	28.96	750.37	1.03	1.75
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SO SRCPARAM	G02P	0.01750	28.96	760.93	1.22	1.75
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SO SRCPARAM	G02C	0.78000	28.96	750.37	1.03	1.75
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SO SRCPARAM	NG801P	0.05450	28.96	502.59	2.35	1.75
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SO SRCPARAM	NG801C	0.14000	28.96	502.59	2.35	1.75
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\*\* BUILDING DOWNWASH FOR ALL ST. ALPHONSUS BOILERS, GENERATORS AND THE

\*\* INCINERATOR

SO BUILDHGT	G01P	25.00	25.00	25.00	25.00	25.00	25.00
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SO BUILDHGT	G01P	25.00	25.00	25.00	25.00	25.00	25.00
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SO BUILDHGT	G01P	25.00	25.00	25.00	25.00	25.00	25.00
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SO BUILDHGT	G01P	27.00	27.00	27.00	27.00	27.00	25.00
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SO BUILDHGT	G01P	25.00	25.00	25.00	25.00	25.00	25.00
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SO BUILDHGT	G01P	25.00	25.00	25.00	25.00	25.00	25.00
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SO BUILDWID	G01P	131.09	130.20	125.35	116.69	104.49	89.11
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SO BUILDWID	G01P	71.03	50.79	29.00	50.79	71.03	89.11
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SO BUILDWID	G01P	104.49	116.69	125.35	130.20	131.09	128.00
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SO BUILDWID	G01P	62.68	62.45	60.33	56.37	50.70	89.11
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SO BUILDWID	G01P	71.03	50.79	29.00	50.79	71.03	89.11
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SO BUILDWID	G01P	104.49	116.69	125.35	130.20	131.09	128.00
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SO BUILDHGT	G01C	25.00	25.00	25.00	25.00	25.00	25.00
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SO BUILDHGT	G01C	25.00	25.00	25.00	25.00	25.00	25.00
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SO BUILDHGT	G01C	25.00	25.00	25.00	25.00	25.00	25.00
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SO BUILDHGT	G01C	27.00	27.00	27.00	27.00	27.00	25.00
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SO BUILDHGT	G01C	25.00	25.00	25.00	25.00	25.00	25.00
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SO BUILDHGT	G01C	25.00	25.00	25.00	25.00	25.00	25.00
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SO BUILDWID	G01C	131.09	130.20	125.35	116.69	104.49	89.11
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SO BUILDWID	G01C	71.03	50.79	29.00	50.79	71.03	89.11
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SO BUILDWID	G01C	104.49	116.69	125.35	130.20	131.09	128.00
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SO BUILDWID	G01C	62.68	62.45	60.33	56.37	50.70	89.11
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SO BUILDWID	G01C	71.03	50.79	29.00	50.79	71.03	89.11
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SO BUILDWID	G01C	104.49	116.69	125.35	130.20	131.09	128.00
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SO BUILDHGT G02P	25.00	25.00	25.00	25.00	25.00	25.00
SO BUILDHGT G02P	25.00	25.00	25.00	25.00	25.00	25.00
SO BUILDHGT G02P	25.00	25.00	25.00	25.00	25.00	25.00
SO BUILDHGT G02P	27.00	27.00	27.00	27.00	27.00	25.00
SO BUILDHGT G02P	25.00	25.00	25.00	25.00	25.00	25.00
SO BUILDHGT G02P	25.00	25.00	25.00	25.00	25.00	25.00
SO BUILDWID G02P	131.09	130.20	125.35	116.69	104.49	89.11
SO BUILDWID G02P	71.03	50.79	29.00	50.79	71.03	89.11
SO BUILDWID G02P	104.49	116.69	125.35	130.20	131.09	128.00
SO BUILDWID G02P	62.68	62.45	60.33	56.37	50.70	89.11
SO BUILDWID G02P	71.03	50.79	29.00	50.79	71.03	89.11
SO BUILDWID G02P	104.49	116.69	125.35	130.20	131.09	128.00

SO BUILDHGT G02C	25.00	25.00	25.00	25.00	25.00	25.00
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SO BUILDWID G02C	131.09	130.20	125.35	116.69	104.49	89.11
SO BUILDWID G02C	71.03	50.79	29.00	50.79	71.03	89.11
SO BUILDWID G02C	104.49	116.69	125.35	130.20	131.09	128.00
SO BUILDWID G02C	62.68	62.45	60.33	56.37	50.70	89.11
SO BUILDWID G02C	71.03	50.79	29.00	50.79	71.03	89.11
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SO BUILDWID NGB01P	131.09	130.20	125.35	116.69	104.49	89.11
SO BUILDWID NGB01P	71.03	50.79	29.00	50.79	71.03	89.11
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SO BUILDWID NGB01P	62.68	62.45	60.33	56.37	50.70	89.11
SO BUILDWID NGB01P	71.03	50.79	29.00	50.79	71.03	89.11
SO BUILDWID NGB01P	104.49	116.69	125.35	130.20	131.09	128.00
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SO BUILDWID NGB01C	131.09	130.20	125.35	116.69	104.49	89.11
SO BUILDWID NGB01C	71.03	50.79	29.00	50.79	71.03	89.11
SO BUILDWID NGB01C	104.49	116.69	125.35	130.20	131.09	128.00
SO BUILDWID NGB01C	62.68	62.45	60.33	56.37	50.70	89.11
SO BUILDWID NGB01C	71.03	50.79	29.00	50.79	71.03	89.11
SO BUILDWID NGB01C	104.49	116.69	125.35	130.20	131.09	128.00

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SO SRCGROUP PM10G G01P G02P

SO SRCGROUP PM10B NGB01P

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\*\*SO SRCGROUP PM10 G01P G02P NGB01P

\*\*SO SRCGROUP CO G01C G02C NGB01C

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RE DISCCART	0.00	187.00
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 \*\*\* SETUP Finishes Successfully \*\*\*  
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\*\*\* ISCST3 - VERSION 95250 \*\*\*  
01/10/96

16:37:55

\*\*\* St. Alphonsus Medical Center Boiler #1, and Generators 1&2 --

\*\*\* impacts on PM-10, and CO concentrations.

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PAGE 37  
\*\*MODELOPTs: CONC

URBAN FLAT

NOSTD

NOCALM

\*\*\* THE SUMMARY OF MAXIMUM PERIOD ( 8760 HRS) RESULTS \*\*\*

\*\* CONC OF OTHER IN (MICROGRAMS/CUBIC-METER)

\*\*

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
PM10G	1ST HIGHEST VALUE IS	0.28723 AT (	0.00, 229.00, 0.00, 0.00)	DC	NA
	2ND HIGHEST VALUE IS	0.25855 AT (	0.00, 260.00, 0.00, 0.00)	DC	NA
	3RD HIGHEST VALUE IS	0.23629 AT (	-93.00, 281.00, 0.00, 0.00)	DC	NA
	4TH HIGHEST VALUE IS	0.21436 AT (	0.00, 187.00, 0.00, 0.00)	DC	NA
	5TH HIGHEST VALUE IS	0.19201 AT (	0.00, 305.00, 0.00, 0.00)	DC	NA
	6TH HIGHEST VALUE IS	0.13536 AT (	247.00, -23.00, 0.00, 0.00)	DC	NA
PM10B	1ST HIGHEST VALUE IS	0.45198 AT (	0.00, 229.00, 0.00, 0.00)	DC	NA
	2ND HIGHEST VALUE IS	0.40511 AT (	0.00, 260.00, 0.00, 0.00)	DC	NA
	3RD HIGHEST VALUE IS	0.33454 AT (	-93.00, 281.00, 0.00, 0.00)	DC	NA
	4TH HIGHEST VALUE IS	0.25788 AT (	0.00, 305.00, 0.00, 0.00)	DC	NA
	5TH HIGHEST VALUE IS	0.23348 AT (	0.00, 187.00, 0.00, 0.00)	DC	NA
	6TH HIGHEST VALUE IS	0.19132 AT (	247.00, -23.00, 0.00, 0.00)	DC	NA
COG	1ST HIGHEST VALUE IS	13.12341 AT (	0.00, 229.00, 0.00, 0.00)	DC	NA
	2ND HIGHEST VALUE IS	11.76386 AT (	0.00, 260.00, 0.00, 0.00)	DC	NA
	3RD HIGHEST VALUE IS	10.72747 AT (	-93.00, 281.00, 0.00, 0.00)	DC	NA
	4TH HIGHEST VALUE IS	9.77090 AT (	0.00, 187.00, 0.00, 0.00)	DC	NA
	5TH HIGHEST VALUE IS	8.73291 AT (	0.00, 305.00, 0.00, 0.00)	DC	NA
	6TH HIGHEST VALUE IS	6.13612 AT (	247.00, -23.00, 0.00, 0.00)	DC	NA
COB	1ST HIGHEST VALUE IS	1.16105 AT (	0.00, 229.00, 0.00, 0.00)	DC	NA
	2ND HIGHEST VALUE IS	1.04066 AT (	0.00, 260.00, 0.00, 0.00)	DC	NA
	3RD HIGHEST VALUE IS	0.85936 AT (	-93.00, 281.00, 0.00, 0.00)	DC	NA
	4TH HIGHEST VALUE IS	0.66245 AT (	0.00, 305.00, 0.00, 0.00)	DC	NA
	5TH HIGHEST VALUE IS	0.59977 AT (	0.00, 187.00, 0.00, 0.00)	DC	NA
	6TH HIGHEST VALUE IS	0.49147 AT (	247.00, -23.00, 0.00, 0.00)	DC	NA

\*\*\* RECEPTOR TYPES: GC = GRIDCART  
GP = GRIDPOLR  
DC = DISCCART  
DP = DISCPOLR  
BD = BOUNDARY

\*\*\* ISCST3 - VERSION 95250 \*\*\*  
 01/10/96  
 16:37:55

\*\*\* St. Alphonsus Medical Center Boiler #1, and Generators 1&2 --  
 \*\*\* impacts on PM-10, and CO concentrations.

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PAGE 38  
 \*\*MODELOPTs: CONC

URBAN FLAT

NOSTD

NOCALM

\*\*\* THE SUMMARY OF HIGHEST 1-HR RESULTS \*\*\*

\*\* CONC OF OTHER IN (MICROGRAMS/CUBIC-METER)

\*\*

NETWORK		DATE		RECEPTOR (XR, YR, ZELEV, ZFLAG)				
GROUP ID	GRID-ID	AVERAGE CONC	(YYMMDDHH)					
PM10G DC	HIGH 1ST HIGH VALUE IS NA	3.75730	ON 85122705: AT (	-93.00,	281.00,	0.00,	0.00)	
PM10B DC	HIGH 1ST HIGH VALUE IS NA	7.32486	ON 85122708: AT (	99.00,	73.00,	0.00,	0.00)	
COG DC	HIGH 1ST HIGH VALUE IS NA	175.43237	ON 85122705: AT (	-93.00,	281.00,	0.00,	0.00)	
COB DC	HIGH 1ST HIGH VALUE IS NA	18.81615	ON 85122708: AT (	99.00,	73.00,	0.00,	0.00)	

\*\*\* RECEPTOR TYPES: GC = GRIDCART  
 GP = GRIDPOLR  
 DC = DISCCART  
 DP = DISCPOLR  
 BD = BOUNDARY

\*\*\* ISCST3 - VERSION 95250 \*\*\*  
01/10/96

\*\*\* St. Alphonsus Medical Center Boiler #1, and Generators 1&2 --

\*\*\*

\*\*\* impacts on PM-10, and CO concentrations.

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16:37:55

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\*\*MODELOPTs: CONC

URBAN FLAT

NOSTD

NOCALM

\*\*\* THE SUMMARY OF HIGHEST 8-HR RESULTS \*\*\*

\*\* CONC OF OTHER IN (MICROGRAMS/CUBIC-METER)

\*\*

NETWORK		DATE		RECEPTOR (XR, YR, ZELEV, ZFLAG)			
GROUP ID	GRID-ID	AVERAGE CONC	(YYMMDDHH)				
OF TYPE	GRID-ID						
PM10G	HIGH 1ST HIGH VALUE IS	2.41041	ON 85122408: AT (	-93.00,	281.00,	0.00,	0.00)
DC	NA						
PM10B	HIGH 1ST HIGH VALUE IS	2.91843	ON 85101408: AT (	0.00,	260.00,	0.00,	0.00)
DC	NA						
COG	HIGH 1ST HIGH VALUE IS	112.03867	ON 85122408: AT (	-93.00,	281.00,	0.00,	0.00)
DC	NA						
COB	HIGH 1ST HIGH VALUE IS	7.49689	ON 85101408: AT (	0.00,	260.00,	0.00,	0.00)
DC	NA						

\*\*\* RECEPTOR TYPES: GC = GRIDCART  
GP = GRIDPOLR  
DC = DISCCART  
DP = DISCPOLR  
BD = BOUNDARY

\*\*\* ISCST3 - VERSION 95250 \*\*\*  
 01/10/96  
 16:37:55

\*\*\* St. Alphonsus Medical Center Boiler #1, and Generators 1&2 --  
 \*\*\* impacts on PM-10, and CO concentrations.

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 \*\*MODELOPTs: CONC

URBAN FLAT

NOSTD

NOCALM

\*\*\* THE SUMMARY OF HIGHEST 24-HR RESULTS \*\*\*


GROUP ID OF TYPE		NETWORK GRID-ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZFLAG)
PM10G DC	HIGH NA	1ST HIGH VALUE IS	1.17521	ON 85010324: AT (	-93.00, 281.00, 0.00, 0.00)
PM10B DC	HIGH NA	1ST HIGH VALUE IS	1.56822	ON 85101424: AT (	0.00, 260.00, 0.00, 0.00)
COG DC	HIGH NA	1ST HIGH VALUE IS	54.48572	ON 85010324: AT (	-93.00, 281.00, 0.00, 0.00)
COB DC	HIGH NA	1ST HIGH VALUE IS	4.02845	ON 85101424: AT (	0.00, 260.00, 0.00, 0.00)

\*\*\* RECEPTOR TYPES: GC = GRIDCART  
 GP = GRIDPOLR  
 DC = DISCCART  
 DP = DISCPOLR  
 BD = BOUNDARY

January 22, 1996

**MEMORANDUM**

**TO:** Orville D. Green, Assistant Administrator  
Permits and Enforcement

**FROM:** Brian R. Monson, Chief   
Operating Permits Bureau

**SUBJECT:** Issuance of Tier II Operating Permit # 001-00027 to  
Saint Alphonsus Regional Medical Center (Boise)

**PURPOSE**

The purpose of this memorandum is to satisfy the requirements of IDAPA 16.01.01 Sections 400 through 406 (Rules for the Control of Air Pollution in Idaho) for issuing Operating Permits.

**PROJECT DESCRIPTION**

This project is for an Operating Permit (OP) for the Saint Alphonsus Regional Medical Center (SARMC) located in Boise, Idaho. Emission point sources existing at the facility are as follows: four (4) natural gas and/or No. 2 fuel oil boilers with various capacities and six (6) diesel emergency generators. Emissions from the sterilizer, paint booth, storage tanks, and laboratories are included in the engineering technical analysis memorandum.

**SUMMARY OF EVENTS**

On February 21, 1995, the Division of Environmental Quality (DEQ) received an application for a Tier II OP. On July 25, 1995, that application was determined complete. On October 2, 1995, a proposed Tier II OP was issued for public comment. A public comment period was then held from October 2, 1995, to November 7, 1995.

On November 7, 1995, DEQ received comments about the content of the technical analysis memo and the proposed OP. These comments were addressed in the response package and the technical analysis memo and incorporated into the final permit.

On December 21, 1995, SARMC informed DEQ through a letter that the existing incinerator and the heat recovery Boiler #4 have been rendered non-operational are isolated from the system and are in the process of being removed. On January 18, 1996, Harbi Elshafei and Jose Fabile, Air Quality Engineers, toured the incinerator site at the facility and have confirmed that the incinerator and Boiler #4 have been completely removed from the SARMC facility. Therefore, the incinerator and the heat recovery Boiler #4 are not included in the Tier II OP.

**RECOMMENDATIONS**

Based on the review of the Tier II OP application and on applicable state and federal regulations concerning the permitting of air pollution sources, the Bureau staff recommends that SARMC, Boise, be issued a Tier II OP. Staff also recommends that the facility be notified in writing of the obligation to pay permit application fees for Tier II permits.

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**cc:** J. Palmer, SWIRO  
OP File Manual  
Source File  
COF





IDAHO DEPARTMENT  
OF HEALTH AND WELFARE  
  
DIVISION OF  
ENVIRONMENTAL QUALITY

1410 North Hilton, Boise, ID 83706-1255, (208) 334-0502

Philip E. Batt, Governor

January 22, 1996

**MEMORANDUM**

**TO:** Dave Sande, Accountant Supervisor  
Support Services

**FROM:** Harbi Elshafei, Air Quality Engineer *Harbi*  
Operating Permits Bureau (OPB)  
Permits and Enforcement

**SUBJECT:** Permit Application Fees for Tier II Permit

The following facility has been reviewed for compliance with IDAPA 16.01.01.470 "Permit Application Fees for Tier II Permits":

**St. Alphonsus Regional Medical Center**

St. Alphonsus Regional Medical Center (SARMC) in Boise, Idaho applied for a Tier II Operating Permit for the sources that exist at the facility. DEQ has released the facility's proposed Tier II Operating Permit. According to IDAPA 16.01.01.470, the facility is subject to permit application fees for Tier II Permits of:

**Five Hundred Dollars and No Cents (\$500.00)**

The contact and mailing address for the above facility is:

**COMPANY CONTACT:** Darrell Fugate, Director of Engineering  
**COMPANY ADDRESS:** 1055 North Curtis Road  
Boise, Idaho 83706

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cc: S. Richards, DEQ  
J. Palmer, SWIRO  
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